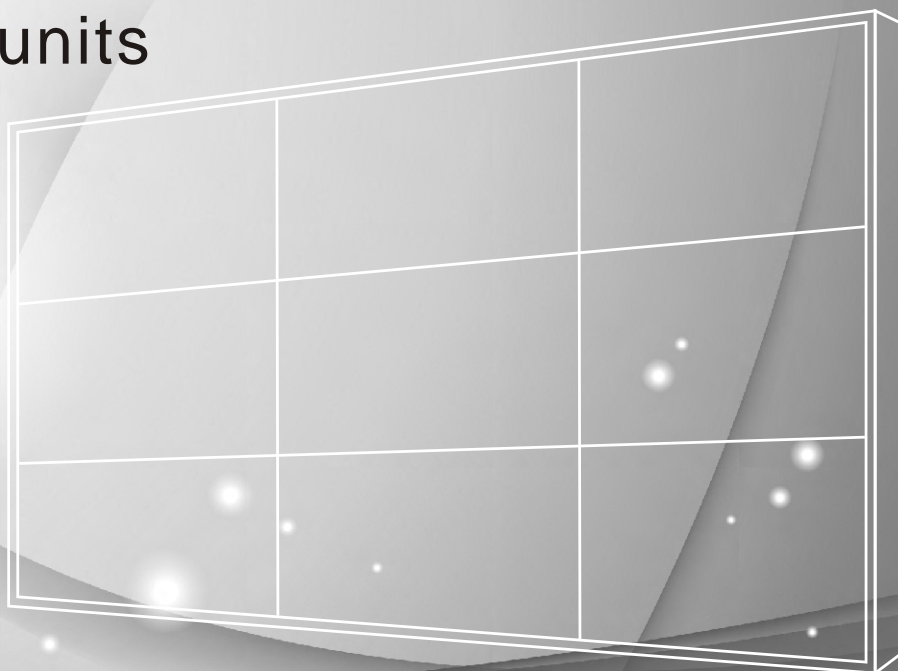




**AGT** TECHNOLOGIES

## LCD display units



User Manual

Splice Liquid Crystal Display

# User manual

Entertainment series

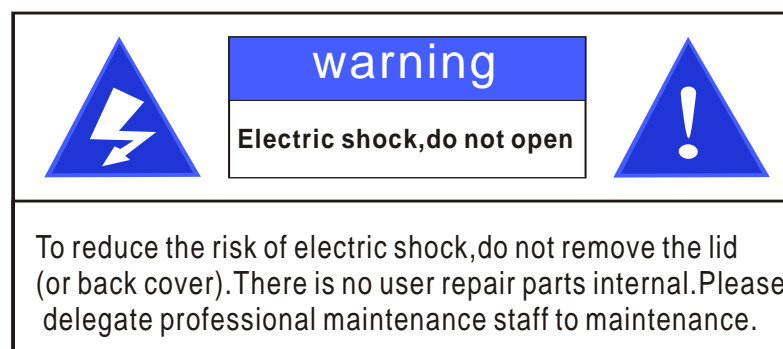
Notice: Before use the screens ,please read this user manual carefully!

Please do not disassembly screens. If screens can not work, please contact local distributor or us!



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- 1 Do read the manual before using.
- 2 Keep the manual well
- 3 Notice the safety warning
- 4 Operation in wet situation is not allowed.
- 5 Keeping away from chemical gas and medicine, do not wash the outer or the inner of the product with acute volatile solvent or cleanser, such as gasoline, acetone.
- 6 Prevent the entering of liquid or other goods, warning if any liquid falls into the inner of products through the interstice.
- 7 There will be heat in operation, so make sure no blocking at the outlet. Do install the machine as the manual.
- 8 A perfect measure of connecting the earth is required, or a confusion of the system may occur, which would lead to the unstable operation of the system, even cause the damage of the equipment.
- 9 Do not install the machine near the power, such as the radiator, heat reservoir, furnace. or others.
- 10 Do cut off the power before pulling out or re-connecting any component( except supporting hot plug ones)
- 11 Please pull out the plug before lighting or long time's shelving.
- 12 Please consult to the professional maintenance man in case that an urgent repair is needed.
- 13 The following requires the maintenance man to handle:
  - a damage of the cable or the plug;
  - any material or liquid enters the inner of the machine;
  - suffered rain;
  - a deviant working or a sharp altering of the performance happens;
  - it drops abruptly or the damage of the crust



Our LCD Display Unit adopted the most advanced industrial LCD panel in the world, which owns the feature of high brightness and contrast, small splicing size, real and nature picture, wide function, simple to function, stable operation, long life, convenient maintenance, low price, etc.

40 inch and 46 inch high definition LCD monitor display unit, build in embedded FPGA hardware controlling system to ensure the stable operation, powerful functions, complex video providing, YpbPr, S-VIDEO, VGA, DVI, HDMI.etc input interface, which meets the real-time processing needs of high definition signal 1920\*1080. LCD is a complete device, requires no accessories, simple installation as blocking by shape to realise an immediate using, protected by the outer harden-glass, convenient transportation and installations, multi-units can combine into a full screen discretionarily (such as 2x2, 4x4, 2x4, M x N).

## 1.1 Products series

- AG-1000 series: Single screen display(repet display 1 signal), M\*N all screens display. It can be run without matrix. Applicable to hotel, entertainment areas, large-scale performance venues, enterprise, public place and advertisement video wall of super market and plaza.

- AG-5000 series: support single screen display( we can input M x N channels signal and display non-repeatedly), any combination display, M x N full screen display function, without conjugate using of matrix system. Which mainly applies for amusement place, public place and meeting room.

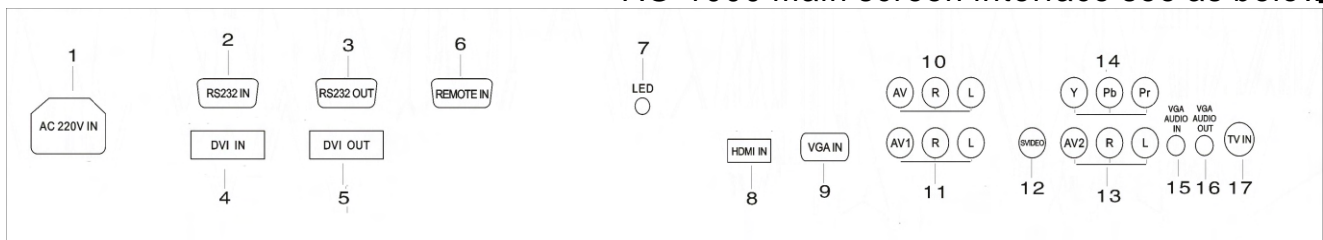
- Our LCD display AGT independent develop most advanced digital processing technique----Dynamict super resolution technique.

## 1.2 Main screen and deputy screens

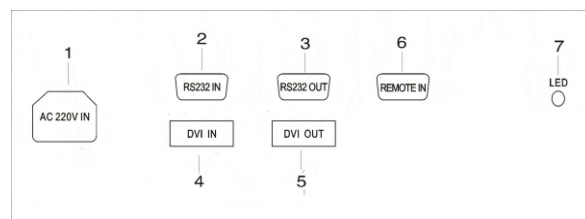
A unit of 1000 series as main screen which afford signal input and disposal, other screens as deputy screens. The interface of main screen is different of deputy screens.

## 1.3 LCD units signal interface

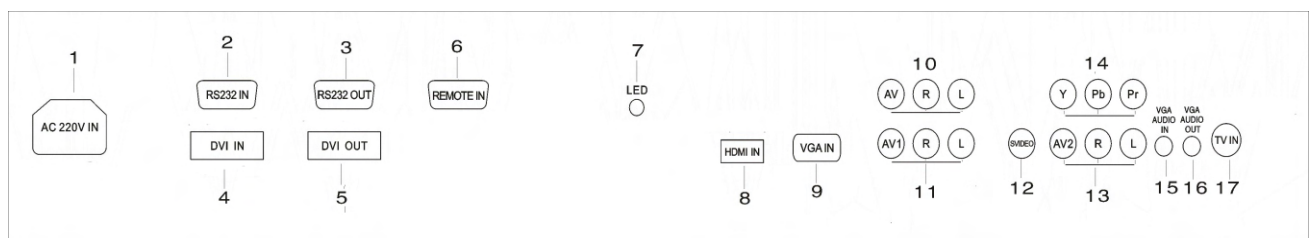
Each LCD Display unit back side mid-down part has one interface panel, use for connect all kinds input and output signal. AG-1000 main screen interface see as below



1000 deputy screens interface see as right:



AG-5000 interface see as below:



- (1)AC 220V: alternating current 220V power input
- (2)RS232 In: SATA control signal input
- (3)RS232 OUT: SATA control signal output
- (4)DVI In: DVI figure signal input
- (5)DVI OUT: DVI figure signal output
- (6)REMOTE In: IR control signal input
- (7)LED: work indicating light, Red for pause, green for work.
- (8)HDMI: high definition digital signal input

- (9)VGA In: PC VGA signal input
- (10)Av: Complex Video/Audio output
- (11)Av1: Complex Video/Audio input
- (12)S VIDEO: S port video signal input
- (13)Av2: Complex video/audio 2 input
- (14)Y/Pb/Pr: high definition chromatic aberration signal
- (15)VGA:VGA Audio output
- (16)VGA audio input
- (17)Tv: VGA Audio output

#### 1.4 LCD display units install order

For convenient LCD manager software recognise and manager different LCD unit, System ordain each LCD display unit corresponding to one address code (ID code). ID code follow the above rules: from LCD frontispiece, up-left is 1, from left to right, up to down sequence. For example:

2x2 Splice coding as following

1	2
3	4

3x3 Splice coding as following

1	2	3
4	5	6
7	8	9

4x4 Splice coding as following

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

And so no

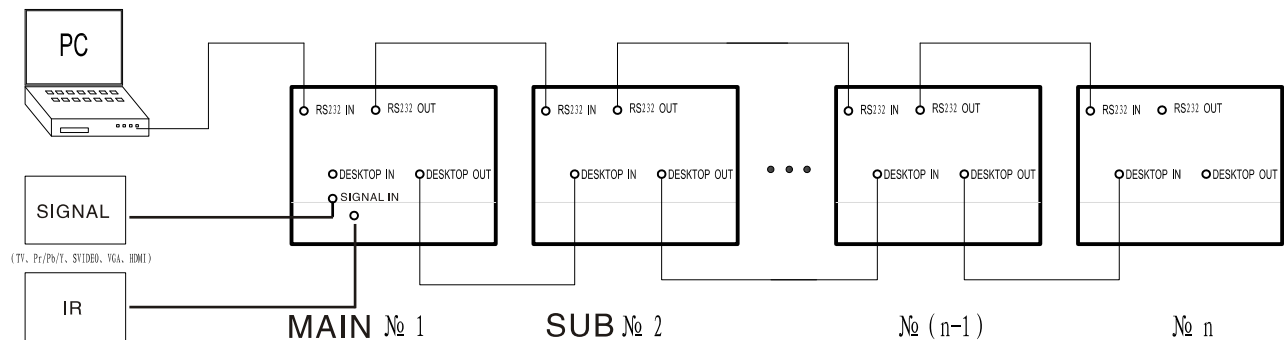
**1.5 LCD Screen splice unit technical parameters**

Model	AG-5046
Dimension	1046 (W)x596.2 (H)x95(D)mm
Resolution	1920x1080P
Activation display area	1018.08(H)x572.67(V)
Color saturation	97%
Brightness	700cd/m2
Contrast	3000:1
Refresh Frequency	120Hz
Display color	10 Bit 10 billion color
View angle	178 degree
Splice sew	18mm
Input interface	Complex Video, chromatic aberration signal , S-VIDEO, VGA, DVI, HDMI
Signal format	NTSC, PAL, 480P, 576P, 720P, 1080I, 1080P
Control interface	IR controller and Rs232
Operation temperature	0-40 °C
Operation humidity	15-85%
Power supply	AC220V
Average power	250W
Weight	22KG
Installation way	Wall, embedded, ground cabinet, suspend, TV cabinet

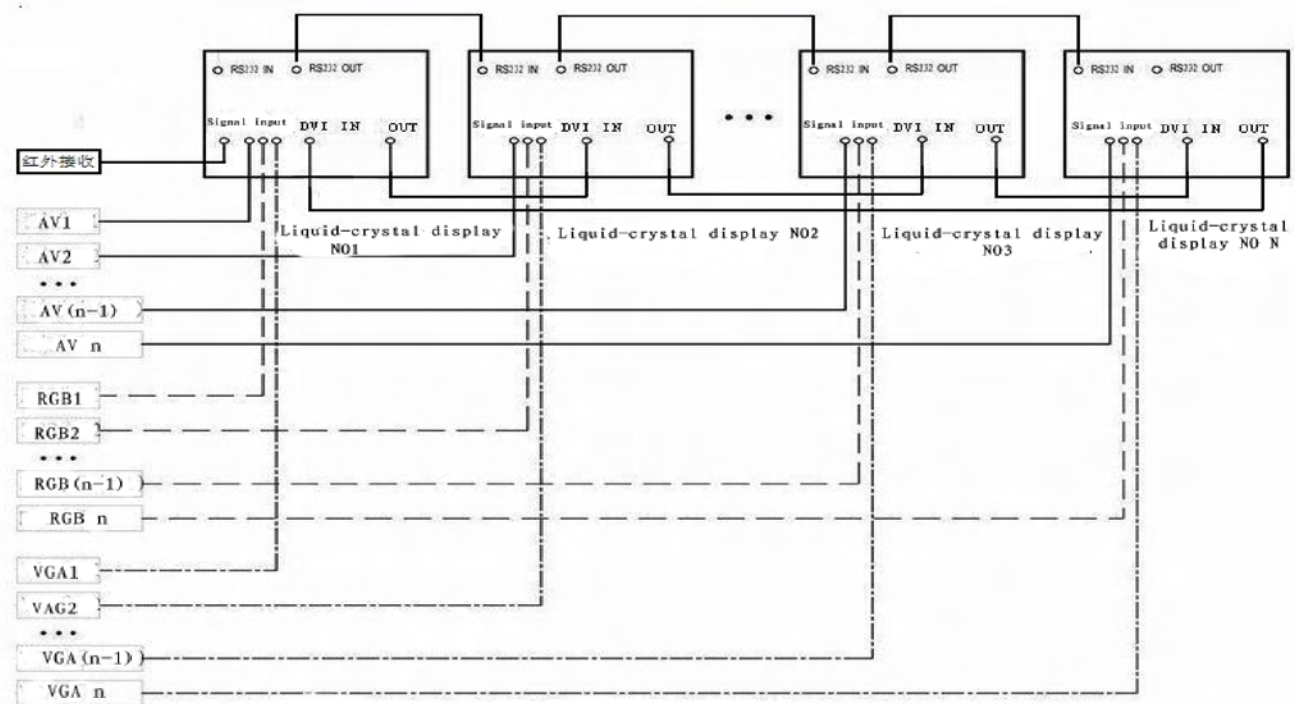


### 2.1 series LCD circuit connection

1000 series LCD wall just can display a video signal at the same time, it can display this signal on all units, multi-units or any combination of units, connection methods is as below:



5000 series LCD wall can individual display video signals, it can display on random combined units, all units, multi-units, connection way is as below:



5000 series liquid crystal splicing unit electricity wiring schematic drawing



- Multi-channel Video signal source apart connect into corresponding matrix input, matrix output according to splice wall ID code connect into corresponding splice wall display unit video input port.
- Control mainframe RS232 control circuit connect into matrix, matrix RS232 output through display unit control signal interface (RS232IN/US232OUI), connect all display units one by one.
- All the liquid crystal display unit concatenate DVI port one by one, the last screen DVI output were followed back to the main screen of the DVI input.。

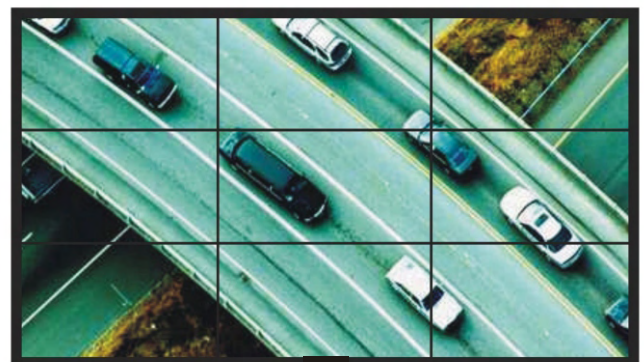
### 2.2 LCD wall install way

According to use situation request and locale practice circs, can adopt TV cabinet、 wall, embedded, cabinet, stand..etc install ways

#### 1)TV cabinet



#### 2)Wall and embedded mounting



#### 3)Console mounting



## 3.1 IR remote control receiver/controller

Using the remote control can easily adjust screen display menu. Before use the remote control must connect main screen interface with REMOTE IN.



### 3.1 .1Controller keys functions introduction: (from up to down)

- [Power]:On/stand by key
- [SOURCE]: Sigantl source select key
- [Image mode]: image scene select key
- [Sound mode]: sound mode select key
- [P.SIZE]: Image size select FULL,16:9 or 4:3
- [DISPLAY]: Image state display
- [Timing] Sleep/timing off key
- [Numer1~9]:Channel direct select key
- [MENU]: call-out/exist menu key
- [VOL+/-]: Adjust volume key
- [CH+/-]: Channel adjust key
- [AUTO]: Auto image amend key
- [HDMI]: HDMI signal input fast key
- [VGA]: VGA signal input fast key
- [AV]: AV signal input fast key
- [YPr/Pb]: YPr/Pb signal input fast key
- [Full screen]:



- [S VIDEO]:S video signal input fast key
- [TV]: TV signal input fast key
- [Each screen]:

## 3.2. AG-5000 IR remote control use explanation

- 1) Plug in SLCD units.
- 2) Power on SLCD units.
- 3) Press [VOL+/-]: Adjust volume key
- 4) Press [CH+/-]: Channel adjust key
- 5) Full screen display: Press function key 1 then press number 1-9 in 2.5 seconds you can choose 1-9 screen's signal display on full screens
- 6) Single display: press function key 2/EXIT key, then press number 0-9 in 2.5 seconds, a single screen can display its input signal, 0 means each screen's input signal



- 7) Single screen display public digital matrix signal: press function key 3/MUTE key then press number 0-9 in 2.5 seconds, a single screen can display public digital matrix signal, press 0 each screen display public digital matrix signal
- 8) Single screen menu operation: if you need to operate the menu of a screen of video wall, for example, No.1 screen, make No.1 screen image display to full screens, then press menu key, you will see images unified change, then make each screen display you will see only No.1 screen parameter change.
- 9) signal cross-screen display: for example, No. 1, the signal should be sent to the 2-screen display, according to the following steps:
  - a first screen of screen No. 1, according to a function key, then press the number keys 1, the No. 1 off-screen signal to the public digital matrix.
  - b by function 2, press the number key 0 key, to return all the screen shows the respective signals.
  - c by function 3, press the number keys 2, this time on the 1st screen signal will be displayed on the 2nd screen.
- 10) Press full screen key, all screens display communion signal
- 11) Press sub-screen key, each screen display communion signal

**Public digital matrix: AG-5000 series in each display unit built-in digital video matrix, each display unit connected with the DVI signal lines, when the stitching unit with mosaic image or signal when the cross-screen display, built-in public digital matrix that is spliced image or cross-screen display of the map sent to all of the DVI signal line. At this point in the DVI cable the signal shall be public digital matrix signals.**

## 4.1 Summarize

LCD installed completed, connect kinds of external equipments and signal circuit, can work normally after debugging.

Before switch-on, please check equipments, power supply and signal circuit connection whether normal, after that, switch on external equipments (such as matrix, PC.) and signal source, then connect with LCD power supply, then LCD can start to work.

## 4.2 AG-1000 series LCD manager software

**AG**–1000 series LCD manager software conjugate with 1000 series LCD corresponding software, this software easy for understand, convenient and quick, it is the tools for conjugate with LCD.

### Software running environment:

- ◇ Operating system: Windows 98/2000/NT/XP
- ◇ Over 32M storing memory
- ◇ Over 10G hard disk space
- ◇ CD-ROM
- ◇ At least one SATA interface

The installation of managing software

Put the disk into the PC driver, execute: AG-5000.exe, the system would auto install the software.

### 4.2.1 the startup and setting of the software

1) turn off the power of the display units, connect the communication lines into each display unit

2) on the PC screen, double click the icon of LCD wall control management system

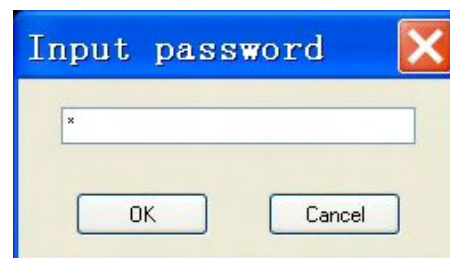
entertainment edition start the software, then

pop-up a window to input the password,

after entering 1 the operation window opens.

Notice: control software acquiescence

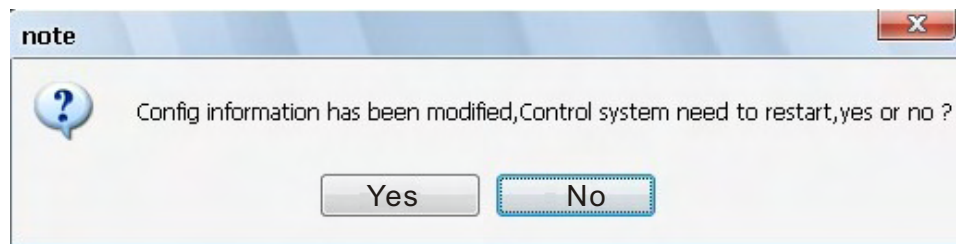
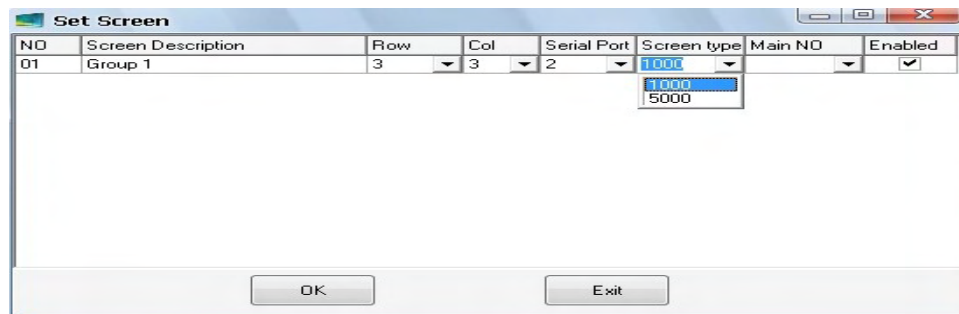
password is 1



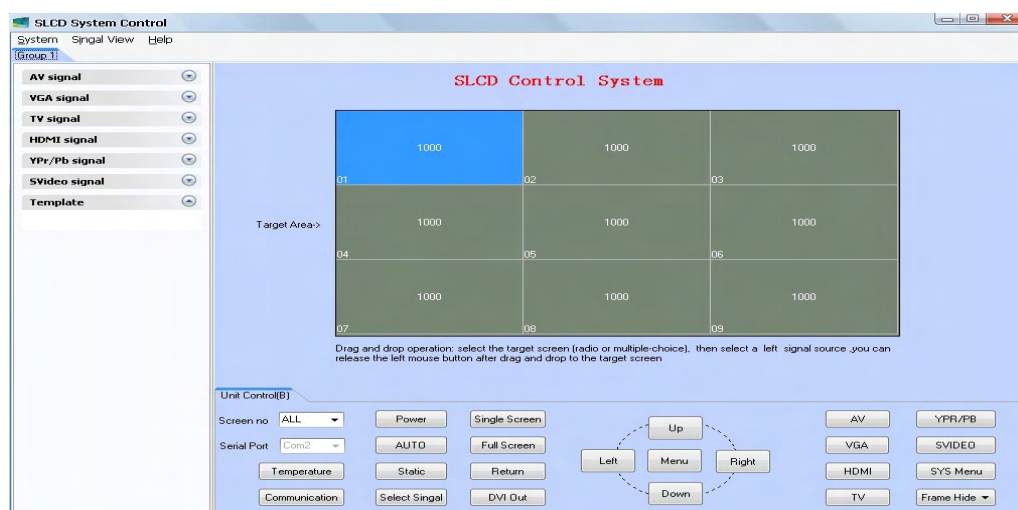


## 4.2.2 LCD units rank settings

Setting LCD number of column and row: software default display unit number of column and row state is 3x3, it means LCD column No. is 3, Row No. is 3, if the fact number is unconformity with default number, like splice wall is 4 columns, 3 rows, can go to operate software: System Setting---- Screen Setting to set columns and rows After finished setting then click switch off key, then the system will remind you restart admin software, press confirm and restart admin software interface



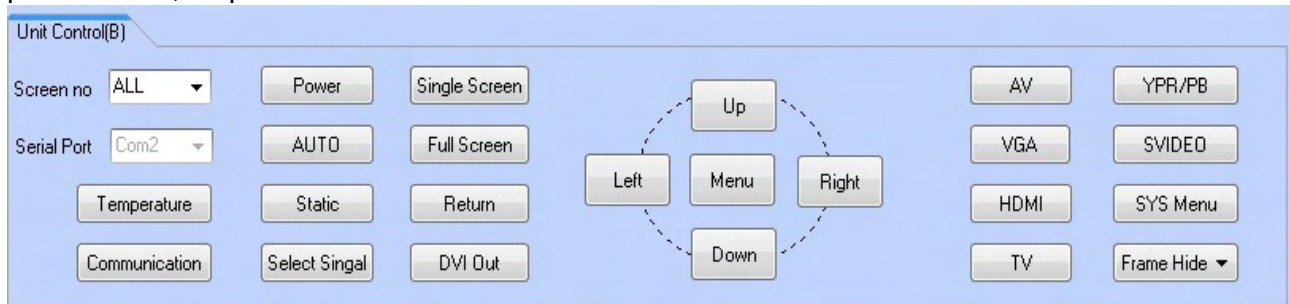
Restart control software, you will see window below:



Notice: When you setting the lines and rows of LCD units, please connect RS232 communication cables to each unit, it will work when you plug in power supply.

### 4.3 Splice Unit Control

Unit Control option card can setting splice wall each display unit's work state and running parameters, as photo



#### 4.3.1 Unit control function introduction:

[Unit Add]: In corresponding splice unit single screen's ID select, for convenient operate the individual display unit, select 00 means all select.

[Setting SATA]: select control mainframe and splice matrix connected SATA port, only select the correct control software then can control splice matrix and splice display unit normally, mostly default SATA will be COM1.

[Power]: simulate circuit switch, can cut off LCD display unit's power and come to pause state.

[Freeze]: freeze displaying images

[Signal select] press this key, corresponding LCD unit display signal select menu

[Full screen display] press this key whole LCD unit display public number matrix's image

[Sub-screen display] Press this key each LCD display unit independent input image

[Single unit back] press this key each LCD display unit will return itself signal input signal

[Public signal] press this key, for selected display unit signal send digital matrix public channel.

[Menu] simulate remote control menu key, with UP/DOWN/LEFT/RIGHT key can operate display unit

[UP],[DOWN],[LEFT],[RIGHT]:menu move assistant key

[AV]AV signal input shortcut key

[VGA]VGA signal input shortcut key

[TV] TV input shortcut key

[YPr/Pb]YPr/Pb signal input shortcut key

[S-VIDEO]S video signal input shortcut key

[HDMI]HDMI signal input shortcut key

[Frame covor]start the function of frame shielding while clicking the key, after press the key please drag and drop once

PC  
HDMI  
TV  
Av1  
AV2  
SVIDEO  
YPRPB

## 4.4 Matrix signal swift and splice control operation

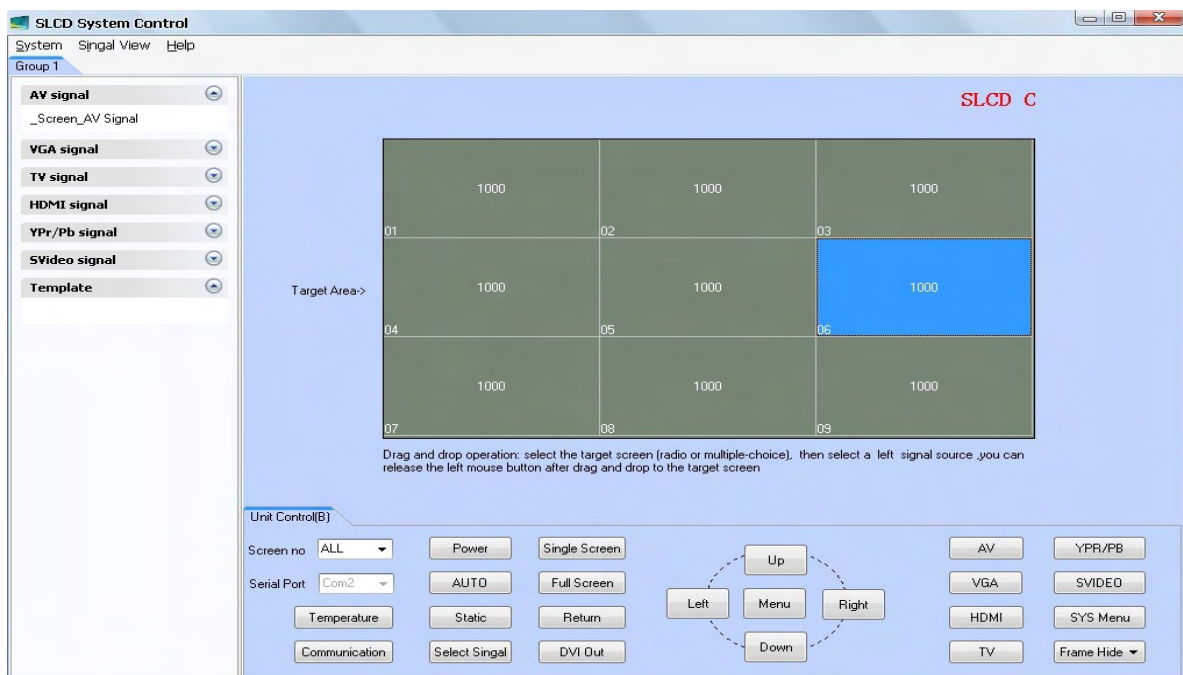
AG-1000 series is an example AG-5000 series operation is the same

### 4.4.1 Single screen display

On software interface, select destine unit,move RGB signal menu to destine unit. Then you will see destine image signal on the screen.(Blue screen when no signal input,same as below)

#### For example:Display video signal 1 on No.6 screen

Left-click No.6 screen,the color will become dark;move mouse to video signal 1, press left move it to NO.6 screen,you will seen video signal 1 on No.6 screen.



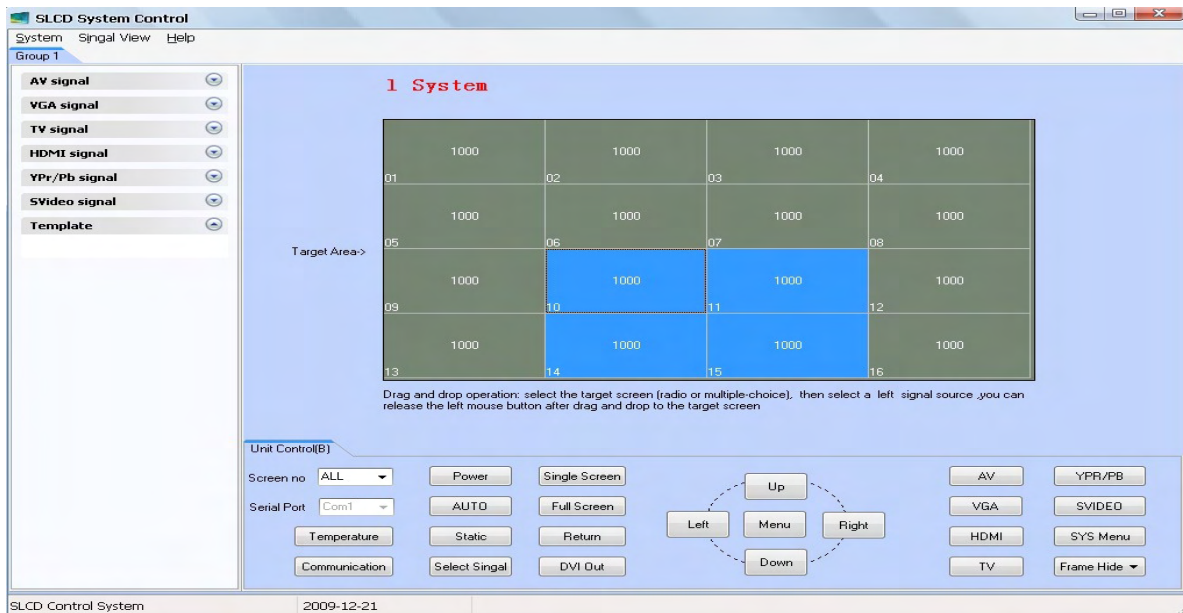
### 4.4.2 Multi-screens display

On software interface,Select several adjacent units, move RGB signal menu to destine unit.Then you will see destine image signal on the screen.You will see destine image display on those units

For example: display RGB signal on number 6、 7、 10、 11 units

Left-click number 6、 7、 10、 11 units, 6、 7、 10、 11 units become blue;move mouse to RGB signal ( display grey ),press left move it to number 6、 7、 10、 11then loosen the mouse,you will see RGB signal on number 6,7,10,11 units(multi-display)



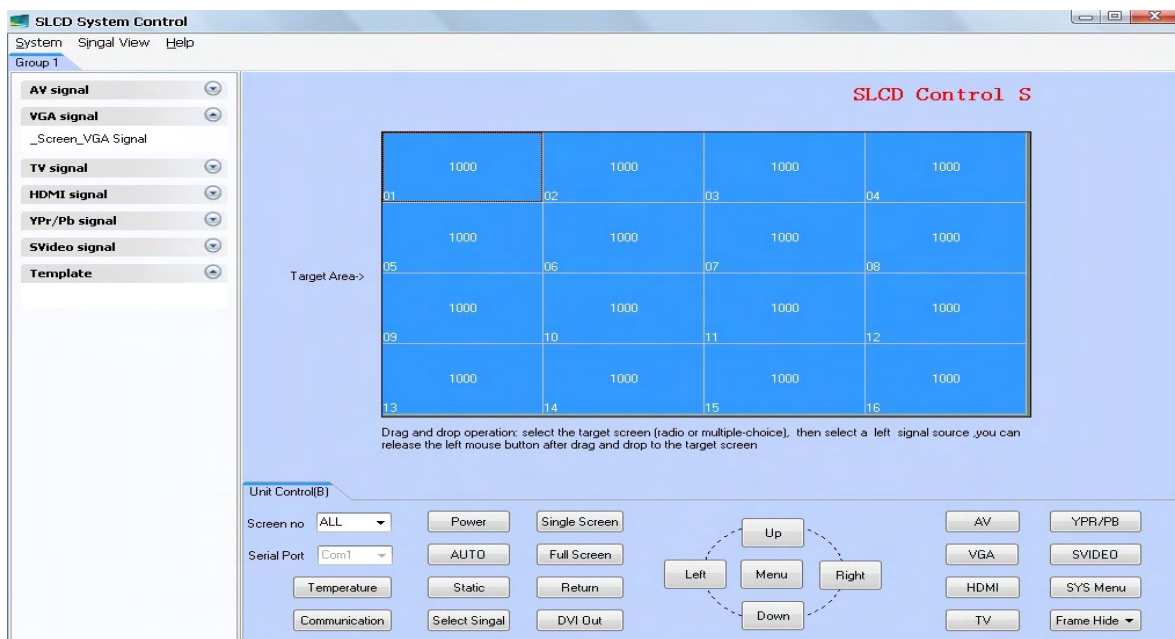


## 4.4.3 All screens display

On software interface, select all the screens, the color become black, move to destine unit in VGA signal menu. Then you will see destine image signal on the screen, press left and moving it to all the units then leave the mouse

For example: display VGA signal on all screens

Left-click and move through all units, units color becomes black, then move mouse to destine unit in RGB signal menu, press left and moving it to all the units then leave the mouse, you will see VGA on all screens

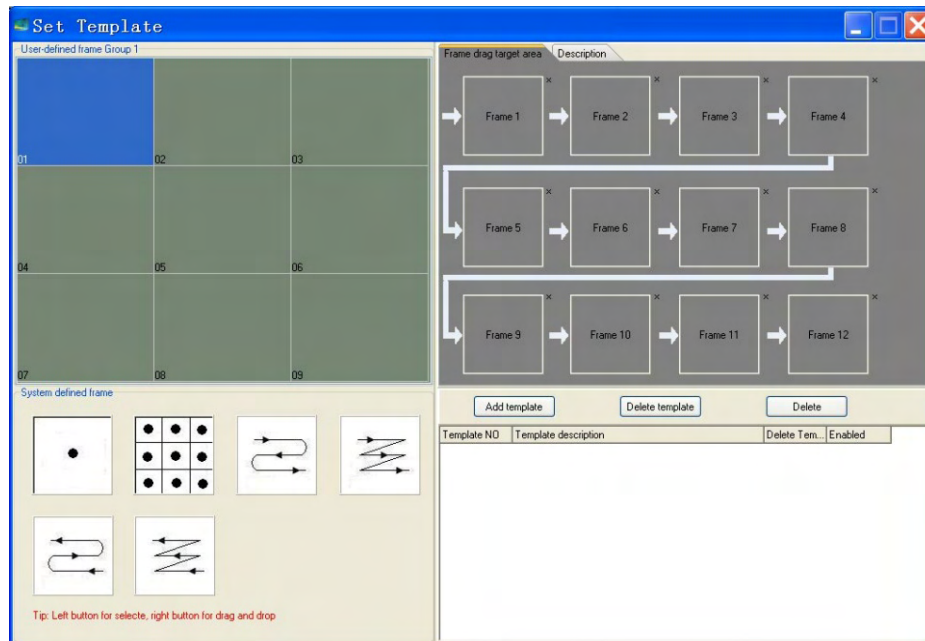


## 4.5 Template ettings

Template function means user define splicing screens display and system provide time sequence display ways, template display flexible, random and individual.

On CONTROL MANAGEMENT SYSTEM---SYSTEM SEETINGS---

TEMPLATE SETTING, then you will see template setting window, see as below:



### 4.5.1 Function explanation

User can random define screens display

User can add and delete template display mode

Control management system provides 12 time sequence programs

Each program display time can set on the right bottom of PROGRAM TIME SEQUENCE

### 4.5.2 User-defined kaleidoscope time sequence

Press TEMPLATE ADD key, you will see below template add window,

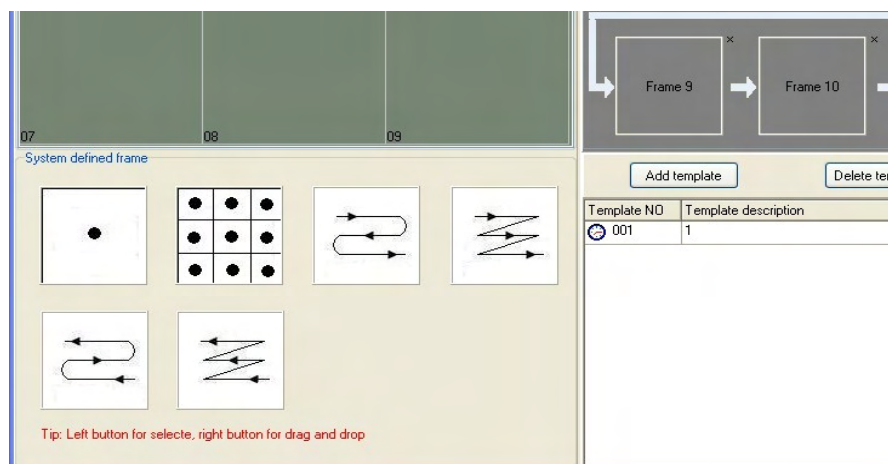


On screen display area,choose the display units which you are willing to show images,, such as user need number 1 and 2 screens to splice display,lecf-click number 1 and 2 units which will become dark,then press right button drag them to time sequence area 1.



## 4.5.3 Series provided template time sequence

Control software bring 6 kinds of template display time sequence, move mouse to one template and press right button to drag it to time sequence area 10,see below picture,



After drag and drop,user can mark out template introduction at TEMPLATE INTRODUCTION,see picture as below.Click confirm key to finish template settings. Invoke template function ,press left button of mouse and drag TEMPLATE of control management system signal source to display area. So LCD units will display TEMPLATE mode.

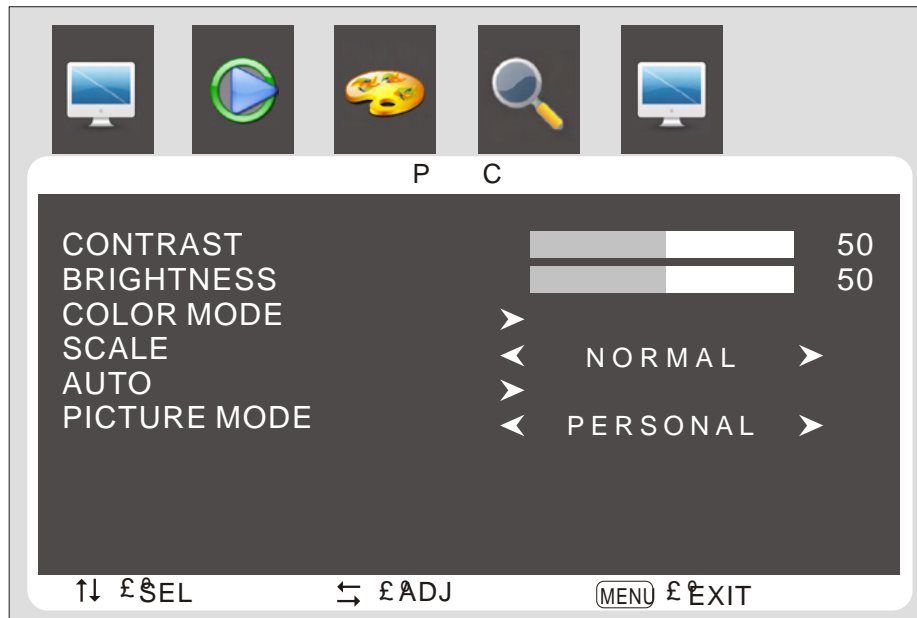


## 5.Screen display menu ( OSD )

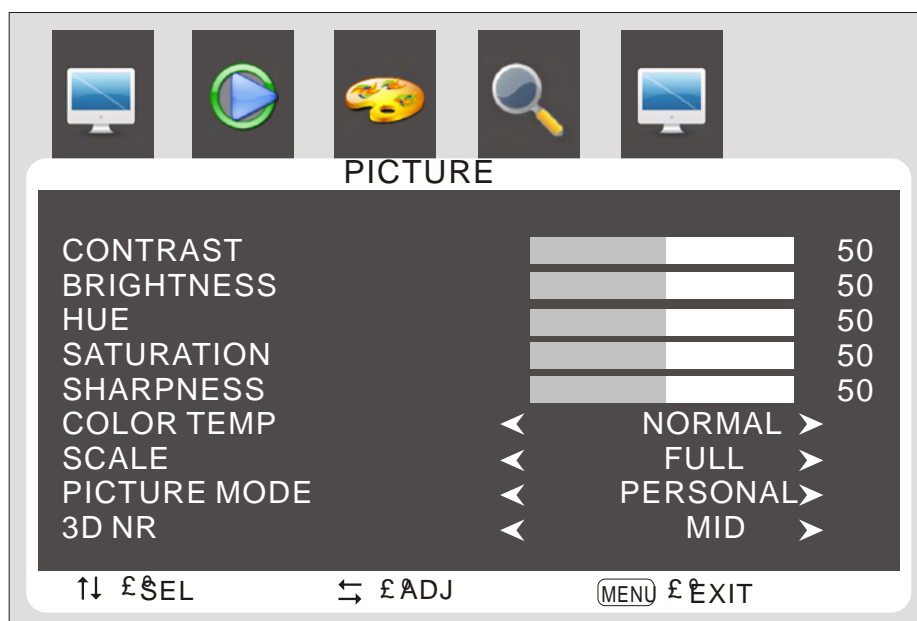
user manual

### 5.1 Image

1.Select **Menu** ,you will see **Image** menu.As shown,  
OSD adjustment interface in **Menu** of PC/HDMI mode



OSD adjustment interface in **Menu** of AV,S-VIDEO,YPBPR mode



## I 5.Screen display menu ( OSD )

user manual

Contrast ratio:Adjust the sharp effects of image, the dark of black part get richer and white get lighten

Brightness:The dark of image get lighten,just as add white in the color

Hue: Cold and warm color adjustment in NTSC format

Saturation: Increase or decrease color

Definition: Increase or decrease definition

Color temprature:Standard,personal setting,warm color,cold color,S-RGB(only PC)

Image mode:Standard,movement,softness,personal setting to adapt the programs.

3D noise reduce:Digital 3D noise reduction

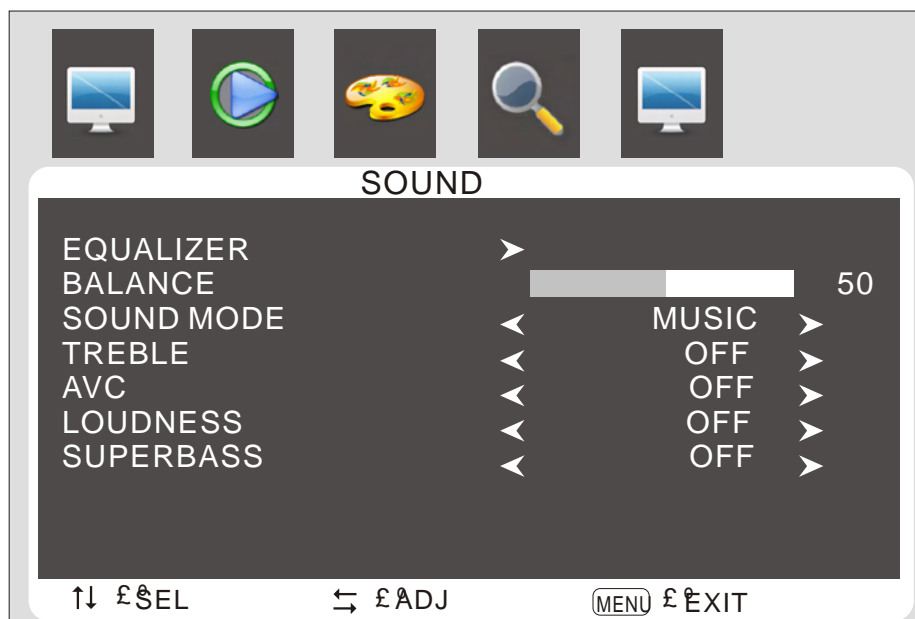
2.Select **Up** or **Down** , high-light display images menu items

3.Select **Left** or **Right** to increase or decrease the parametre of selected items.

4.Complete setting,keep selecting **Menu** until menu exit

### 5.2 Sound

1.Select **Menu** of control software enter the main menu,select **Left&Right** until see **Sound** interface.As following:





## 5.Screen display menu ( OSD )

User manual

Balancer: Increase or decrease frequency response of frequency bands.

Balance: Dual-speaker system,adjust volume balance

Audio:Music/news/standard/personal setting

Treble:Increase or decrease the treble of screen

Auto Volumn control:ON/OFF

Sound Mode:ON/OFF Grade 1,2,3

Mega Bass: Increase bass effect.Grade 1,2,3,4

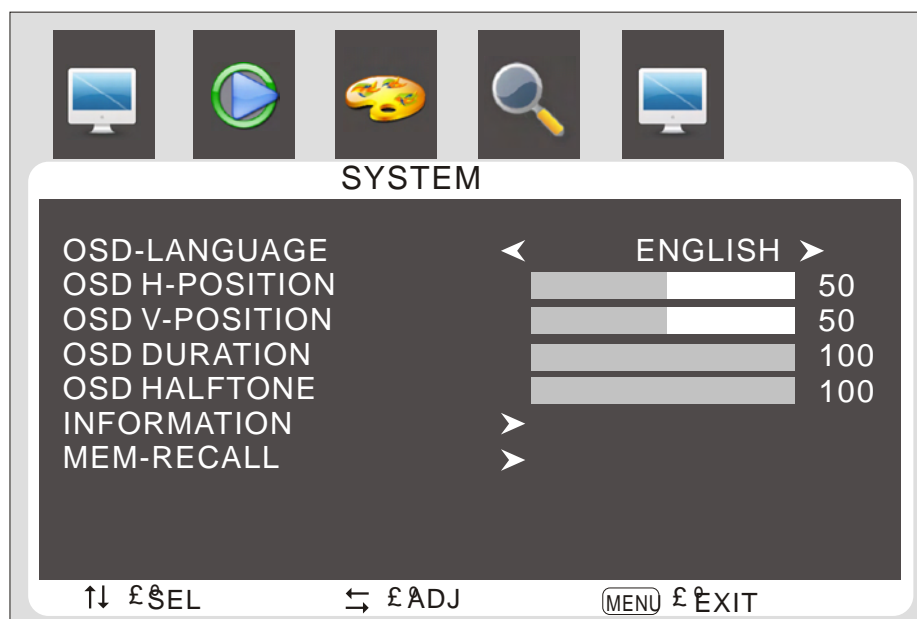
2.Select **Up/ Down**, high-light display Sound menu items:Balancer/Balance/Audio/Treble/ Auto volume control/sound mode/mega bass

3.Press Left/Down to increase or decrease the parameters of selected item.

3.Complete settings, keep selecting **Menu** until menu exit

### 5.3 System

1.Select **Menu** of control software enter the main menu,select **Left&Right** until see **Sound** window .As following:



## I 5.Screen display menu ( OSD )

user manual

Menu language:OSD language menu. English,Chinese,Franch,Italian,Spanish,German, Dutch,Russian, Portuguese,Korean and Arabic.

Menu Horizontal position:Adjust left and right position of OSD interface

Menu virtical position:Adjust the up and down position of OSD interface

Menu display time: OSD menu residence time

Menu diaphaneity: Adjust menu display diaphaneity

System Initialization: Select it will recovery to factory settings

2.Select **Up/ Down**, high-light display **System** menu items

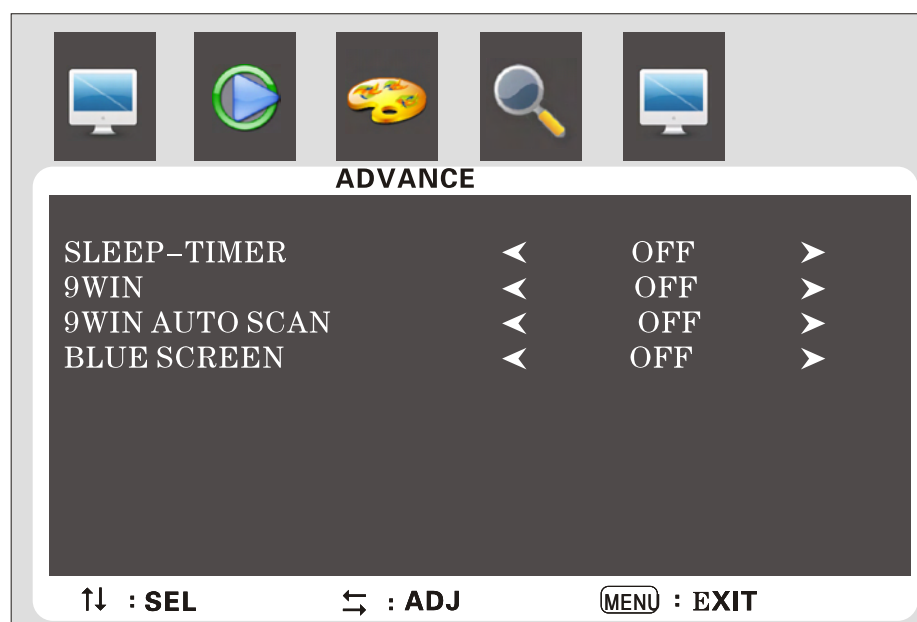
3.Select **Left** or **Right** to increase or decrease the parametre of selected items.

4.Complete setting,keep selecting **Menu** until menu exit

5.4 Advanced settings

1.Select **Menu** of control software enter the main menu,select **Left&Right** until see

**Adanced Settings** interface.As following:





## 5.Screen display menu ( OSD )

user manual

Automatic shutdown: 15 min,30min,45min,60 min automatic shutdown selectable.

9Image

9Image program search

Blue screen: Blue screen display when no signal input

2. Select **Up** or **Down** , high-light display images menu items

3.Select **Left** or **Right** to increase or decrease the parameter of selected items.

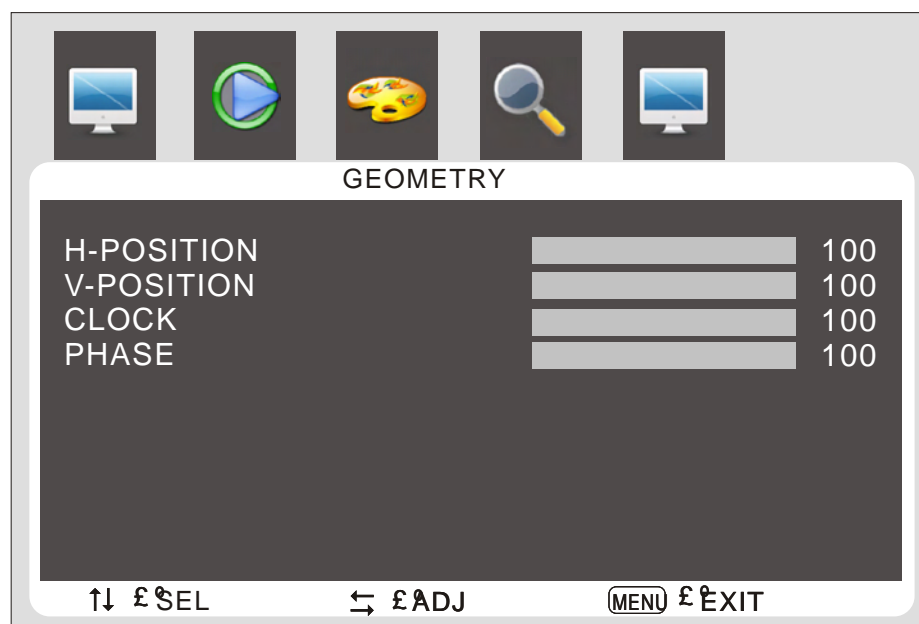
4.Complete setting, keep selecting **Menu** until menu exit

5.5 Geometry

Notice: only PC and HDMI have Geometry adjustment interface

1.Select **Menu** of control software,display the screen menu .Select **Left/Right** to **Geometry**.

As shown:



Horizontal position: Image adjust horizontally

Vertical position: Image adjust vertically

Clock: VGA clock adjustment

Phase: VGA phase adjustment

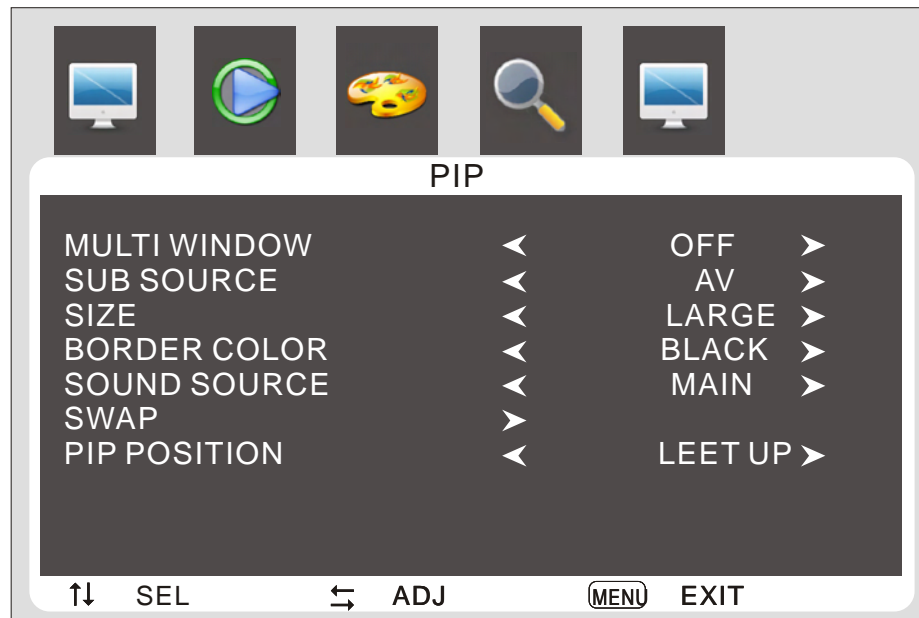
2. Select **Up** or **Down** , high-light display images menu items

3.Select **Left** or **Right** to increase or decrease the parameter of selected items.

4.Complete setting, keep selecting **Menu** until menu exit

### 5.6 Picture in picture

1.Select **Menu**,you will see menu on screen.Select **Right** to **PIP** menu,as shown:



Multi-image: ON/OFF PIP function

Deputy image:Select PIP signal:HD,VGA,Video1,Video2

Size:Adjust PIP windows size

Edge color:Black/Blue

Sound channel:Select primary and secondary audio signal source

Switch:Switch main or deputy picture signal

Sub picture position: Left-up/Left-down/Right-up/Right-down

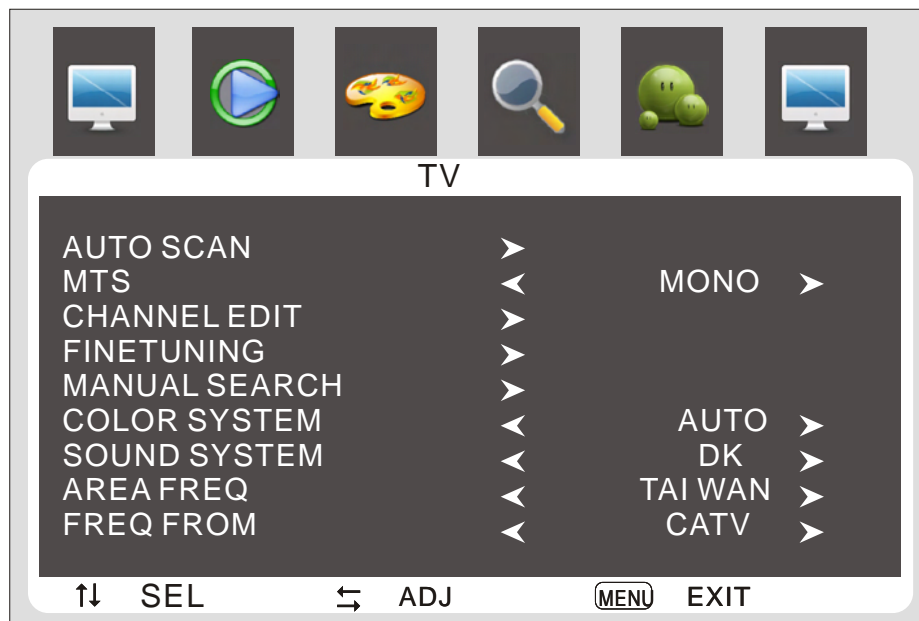
2. Select **Up** or **Down** , high-light display images menu items

3.Select **Left** or **Right** to increase or decrease the parameter of selected items.

4.Complete setting,keep selecting **Menu** until menu exit

### 5.7 TV

1. Select **Menu**,you will see menu on screen.Select **Right** to **TV** menu,as shown:



Auto program searching: Auto search programs and auto save

Stereo:Switch between stereo and mono

Channel editor: Naming channel

Manual tuning:Manual tuning to best effect

Manual searching:Manual search program

Color system:Switch among PAL,SECAM and NTSC

Audio format:Switch among B/G,D/K and I

Frequency dot region: Video region

Frequency dot source: Video program source

1. Select **Down** , high-light display **Channel** or **Auto Searching**,select **Right** to set

2.Complete setting,keep selecting **Manu** until menu exit

Tips for watching antenna or cable TV

Please connet antenna or cable TV with LCD screen

When you plug in LCD screen,run auto save function,search broadcast or cable channels.

If you do not do it,LCD screen maybe unable to operate

When you run Auto save function,check auto run result,select channel +/- to select channels.



Fault performance	Disposal methods
Unable to power on	Check power cables, ensure two ends both plug in socket; Ensure use safe and reliable power supply
No signal	Check signal cables, ensure link rational; Ensure power is turn on; Ensure input options match input signal
Remote control can not work	Ensure battery without weeping; Ensure remote control is in the remote distance; Ensure remote control point to screen remote window; Ensure there are no obstructions between the remote control and screen remote window
Flash point, or stripes appear on screen	Ensure keep away from interference such as car, high voltage power supply and neon
Image color or quality degradation	Ensure all channel settings(brightness,contrast,color) adjust reasonable; more information of video settings, please refer to OSD introductions
Image position or size incorrect	Ensure image position and size adjust to reasonable range
Image or color incorrect	Ensure signal cables link reasonable; If connect with PC, you can change the resolution of PC to get correct image. Output signal differences will influence image
Display alarm	Ensure input signal cables fix reasonable; choose correct input signal
Screen can not display entirely	Address code incorrect; Signal interface incorrect
Blue screen	Signal cables break off; No signal input

**AGT** TECHNOLOGIES  
AGT TECHNOLOGIES

The Consumer shall have no coverage or benefits under this warranty if any of the following conditions are applicable:

## Warranty Explanation:

1. Company product sold out within one year, belong to product-self quality problem, can repair by free charges by this card (Non-human damage), Lifetime Maintenance.
2. Due to incorrect operate or other reasons as well as malfunction product, can repair by this card, free maintenance but components costs.
3. when need repairs, please hand on this card and invoice copy file to us or local maintain department.

Aparted the machine shell privately, tear up label, should charge maintain fee and component fee as ordain

4. Do not accept the malfunction's product due to modify or add other functions' product.

The Consumer shall have no coverage or benefits under this warranty if any of the following conditions are applicable:

1. Periodic check, maintenance ,repair or change accessory due to normal abrasion.
2. Fallen down, extrusion, damp as well as other tampering.
3. Flood, fire, lightening strike as well as other natural hazards or factors beyond control
4. Products repaired by non-authorized repair centres.

5. All warranty information are subject to change according to relevant rules.

£ Please fill in and send back £ ©

User information	Contact			
Address				
Tel	Fax		Mobile	
Zip code		Email		
Model		serial Number	Purchase date:	

## W a r r a n t y r e c o r d s

Fault description	Disposal methods	Warranty date	Maintenance man